1. (Currently Amended) A single plate capacitive acceleration derivative detector comprising:

a housing;

a plate fixed within said housing;

a moveable plate disposed in substantially parallel relation to said fixed plate, said moveable plate coupled to said housing along at least an edge, said moveable plate and said fixed plate defining a distance,

wherein said distance varies in response to acceleration forces acting upon said moveable plate, and wherein said moveable plate and said fixed plate generate a charge displacement capacitance signal; ~~and~~

a transimpedance amplifier receiving said charge displacement capacitance signal and generating a scaled voltage signal therefrom, wherein an acceleration signal is generated from said scaled voltage signal;

an analog-to-digital converter receiving said scales voltage signal and generating a digital voltage signal therefrom; and

a time integrator integrating said digital voltage signal in response to initialization parameters and generating an integrated signal therefrom.

2.-3. (Cancelled)

4. (Currently Amended) The system of claim [3] 1 further comprising a linearizer receiving said integrated signal and generating therefrom a linearized acceleration signal.

5. (Original) The system of claim 4 wherein said linearizer comprises a linear lookup table.

6. (Original) The system of claim 4 further comprising an actuator activating a system component in response to a system control signal; and a processor receiving said linearized acceleration signal and generating said system control signal in response thereto.

7. (Original) The system of claim 1 wherein said moveable plate comprises a flexured diaphragm, a cantilevered beam, a flexible beam, or any object which moves under acceleration with respect to said fixed plate.

8. (Currently Amended) A method for operating a single plate capacitive acceleration derivative detector system comprising:

accelerating the moveable plate, thereby causing a distance between the moveable plate and a fixed plate to change;

generating a variable capacitor signal;

generating a scaled voltage signal in response to said variable capacitor signal; and

generating an acceleration signal in response to said scaled voltage signal, wherein generating said acceleration signal further comprises gain adjusting said scaled voltage signal and generating a voltage differential signal therefrom,

wherein generating said acceleration signal further comprises generating a digital voltage signal from said voltage differential signal,

wherein generating said acceleration signal further comprises generating an integrated voltage signal in response to initialization parameters and integrating said digital voltage signal.

9.-11. (Cancelled)

12. (Currently Amended) The method of claim [11] 8, wherein generating said acceleration signal further comprises linearizing said integrated voltage signal and generating a linearized signal therefrom.

13. (Original) The method of claim 12, wherein generating said acceleration signal further comprises filtering said linearized signal and generating said acceleration signal therefrom.

14. (Original) The method of claim 13 further comprising activating an object control device in response to said acceleration signal.

15. (Original) A system for controlling acceleration including an object adapted to accelerate comprising:

a platform;

a first accelerometer coupled to said platform and comprising a first variable capacitor sensor comprising a housing, a moveable plate, comprising a side and an edge, said edge coupled to said housing structure,

a fixed plate coupled to said housing at a distance from said side of said moveable plate,

said moveable plate being flexible under acceleration forces wherein said distance varies as a function of said acceleration forces to generate a charge displacement capacitance signal in response to change in said distance,

a transimpedance amplifier receiving said charge displacement capacitance signal and generating a time-varying voltage signal in response thereto;

an analog-to-digital converter receiving said time-varying voltage signal and generating a digital voltage signal therefrom;

a time integrator integrating said digital voltage signal in response to initialization parameters and generating an integrated signal therefrom;

a linearizer receiving said integrated signal and generating therefrom a linearized acceleration signal; and

a processor coupled to said first accelerometer receiving said linearized acceleration signal and generating a system control signal in response thereto.

16. (Original) The system of claim 15 further comprising an object control device activating in response to said system control signal, said object control device comprising at least one of a thruster, an attitude control device, a missile steering nozzle, or a vane actuator.

17. (Original) The system of claim 15 further comprising a second accelerometer coupled to said platform orthogonal to said first accelerometer, said second accelerometer generating a second accelerometer signal in response to movement of the system, wherein said processor further generates said system control signal in response to said second accelerometer signal.

18. (Original) The system of claim 17 further comprising a third accelerometer, wherein said second and third accelerometers are arranged with said first accelerometer to receive cross axis thrust data, wherein said processor generates said system control signal in response to said cross axis thrust data.

19. (Original) The system of claim 18 further comprising a serial data bus receiving acceleration signals from said first, second and third accelerometers, said serial data bus exchanging information with said processor.

20. (Original) The system of claim 16, wherein said moveable plate comprises a flexured diaphragm, a cantilevered beam, a flexible beam, or any object which moves under acceleration with respect to said fixed plate.